

FACT SHEET

as required by LAC 33:IX.3111 for major LPDES facilities, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0036366; AI 4839; PER20060001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. THE APPLICANT IS:** City of Lake Charles
Sewage Treatment Plants B and C
1132 West 18th Street
Lake Charles, LA 70601
- II. PREPARED BY:** Ronda Burtch
- DATE PREPARED:** August 20, 2007
- III. PERMIT ACTION:** reissue LPDES permit LA0036366, AI 4839; PER20060001
- LPDES application received: November 16, 2006
- LPDES permit issued: March 1, 2002
LPDES permit expired: February 28, 2007

IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the mid and south Lake Charles area.
- B. The permit application does indicate the receipt of industrial wastewater. The industrial dischargers include:

<u>Name of Discharger</u>	<u>Flow</u>
Cintas Corporation	24,286.89 GPD
Union Pacific Railroad	5.88 GPD
Carboline Company	0 GPD
Aeroframe Services	301.71 GPD
Kelley's Spray-All	142.86 GPD

- C. The facility is located at 1132 West 18th Street in Lake Charles, Calcasieu Parish.
- D. Plant B and C both have independent headworks. Both plants have aeration basins, final clarifiers, and aerobic sludge digesters. Plant C is an extended aeration sewage treatment plant. The sludge from plant B goes to a holding tank and then it is transferred to Plant C for digestion. The sludge from Plant B and C is then pressed from Plant C. The effluent from Plants B and C combine before the ultraviolet light disinfection and then is discharged from the Outfall for Plant C.
- E. Outfall 001

Discharge Location: Latitude 30° 12' 26" North
Longitude 93° 14' 22" West

Description: treated sanitary wastewater

Combined Design Capacity: 6.2 MGD

City of Lake Charles
 Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
 Page 2

Please note that if the facility grows to a discharge beyond the design capacity of the facility, additional sewage treatment may be required with prior approval of the facility's plans by the Louisiana Department of Health and Hospitals and notification must be submitted to the LDEQ. Also, if the expected flow reaches or exceeds the design capacity of the facility, a permit modification may be required.

Type of Flow Measurement which the facility is currently using:

Combination Flow Meter / Continuous Recorder

V. RECEIVING WATERS:

The discharge is by pipe into Contraband Bayou, thence into the Calcasieu River/Ship Channel in segment 030305 of the Calcasieu River Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The critical low flow (7Q10) of Contraband Bayou is 32 cfs.

The hardness value is 651.8 mg/l and the fifteenth percentile value for TSS is 9.48 mg/l.

The designated uses and degree of support for Segment 030305 of the Calcasieu River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 030305	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partial	Not Supported	Full	Not Supported	N/A	N/A	N/A	N/A

^{1/} The designated uses and degree of support for Segment 030305 of the Calcasieu River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 030305 of the Calcasieu River Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

City of Lake Charles
Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
Page 3

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Ronda Burtch
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 030305, Contraband Bayou (Estuarine), is not listed on LDEQ's Final 2004 303(d) List as impaired. However, subsegment 030305 was previously listed as impaired for toxics, nitrate/nitrite (nitrite + nitrate as N), organic enrichment/low DO, pathogen indicators, and phosphorus, for which the below TMDLs have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving waterbodies based upon additional TMDLs and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 030305:

Total Maximum Daily Load for Toxics for the Calcasieu Estuary

Priority organics are identified on EPA's court-ordered 303(d) List as causing impairment of Contraband Bayou water, but no specific pollutants are listed. As per the TMDL, "There are no known or suspected discharges of priority organics to Contraband Bayou. There is no evidence that priority organics are causing impairment of this subsegment. Therefore, this subsegment should be delisted for priority organics." Therefore, no limitations for toxics (priority organics) will be required of this facility.

TMDLs for Dissolved Oxygen for the Calcasieu Estuary

In 1985, a calibrated model was developed for the Calcasieu River Basin and wasteload allocations for Bayou D'Inde and portions of Contraband Bayou, West Fork, and Bayou Choupique were developed and approved by

City of Lake Charles
Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
Page 4

the USEPA. However, updating and expansion of the model was necessary as part of the current study to cover upstream portions of the West Fork, Contraband Bayou, Bayou Choupique, and approximately 3.8 km of the Houston River and to account for changes in point source loading in these watersheds.

TMDLs for portions of the Calcasieu River Basin including Bayou D'Inde and portions of Contraband Bayou, West Fork Calcasieu River, and Bayou Choupique were originally developed in a TMDL study by Duke (1985). The 1985 model was expanded as part of this study to encompass upstream portions of subsegments 030305 (Contraband Bayou), 031001 (Bayou Choupique), and 030801 (West Fork) and a 3.8-kilometer (km) portion of Subsegment 030806 (Houston River). Load limitations for oxygen-demanding substances and goals for the reduction of those pollutants are presented in this report for Contraband Bayou, Bayou Choupique, West Fork, a portion of the Houston River, and Bayou D'Inde (Subsegment 030901). Contraband Bayou and Bayou D'Inde were also listed on the court-ordered list for nutrients. LDEQ's position, as supported by the declaratory ruling issued by Secretary Givens in response to the lawsuit regarding water quality criteria for nutrients (*Sierra Club v. Givens*, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So.2d 1106 (La. 1998), is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited.

Reductions in point source loadings to Contraband Bayou were not projected because the current major contributors to the loading are already treating at advanced secondary levels of treatment, and some of these dischargers (Lake Charles Plants B and C) are expected to be removed from Contraband Bayou in the next three to four years. The D.O. criteria for Bayou Choupique and Bayou D'Inde were attained with no reductions in nonpoint or point sources.

The TMDL does not require any reductions to point source discharges, but the Original 1980 Calcasieu River Basin Plan requires the City of Lake Charles / Plants B and C to achieve advanced treatment of 10 CBOD₅ / 15 TSS / 5 NH₃-N and a minimum DO of 4 mg/L. The Lakes Charles Plants B and C have not been removed from Contraband Bayou and the design capacity has remained the same as what was modeled in the TMDL. Based on this, the City of Lake Charles / Plants B and C will continue to be permitted in accordance with the 1980 Calcasieu River Basin Plan and in accordance with the previous permit.

Contraband Bayou (Estuarine) TMDL for Fecal Coliform

This TMDL applies to sanitary dischargers only. As per the TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will remain as previously permitted.

City of Lake Charles
 Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
 Page 5

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅	517	10 mg/l	15 mg/l	In accordance with the SSEL, limitations are derived from the the Calcasieu River Basin Plan and in accordance with the previous permit.
TSS	776	15 mg/l	23 mg/l	In accordance with the SSEL, limitations are derived from the Calcasieu River Basin Plan and in accordance with the previous permit.
Ammonia-Nitrogen	259	5 mg/l	10 mg/l	In accordance with the SSEL, limitations are derived from the Calcasieu River Basin Plan and in accordance with the previous permit.
Dissolved Oxygen	N/A	4 mg/l min.	N/A	In accordance with the SSEL, limitations are derived from the Calcasieu River Basin Plan and in accordance with the previous permit.

****This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.**

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C, the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

City of Lake Charles
Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
Page 6

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Toxicity Characteristics

In accordance with EPA's Region 6 Post-Third Round Toxics Strategy, permits issued to treatment works treating domestic wastewater with a flow (design or expected) greater than or equal to 1 MGD shall require biomonitoring at some frequency for the life of the permit or where available data show reasonable potential to cause lethality, the permit shall require a whole effluent toxicity (WET) limit (*Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, September 27, 2001, VERSION 4).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No. LA0036366, **Biomonitoring Section** for the organisms indicated below.

TOXICITY TESTS

FREQUENCY

Chronic static renewal 7-day survival & reproduction test
using water flea Ceriodaphnia dubia (Method 1002.0)

1/Quarter

Chronic static renewal 7-day survival & growth test
using fathead minnow (Pimephales promelas) (Method 1000.0)

1/Quarter

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 10%, 13%, 17%, 23%, and 31%. The biomonitoring critical dilution is defined as 23% effluent. The critical dilution is calculated in Appendix I of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the **Biomonitoring Section** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the **Biomonitoring Section** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

If there are no lethal or sub-lethal effects demonstrated after the first year of quarterly testing, the permittee may certify fulfillment of the WET testing requirements in writing to the permitting authority. If granted, the monitoring frequency for the test species may be reduced to not less than once per year for the less sensitive species (usually *Pimephales promelas*) and not less than twice per year for the more sensitive species (usually *Ceriodaphnia dubia*). Upon expiration of the permit, the monitoring frequency for both species shall revert to once per quarter until the permit is reissued.

City of Lake Charles
Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
Page 7

X. PREVIOUS PERMITS:

LPDES Permit No. LA0036366: Issued: March 1, 2002
Expired: February 28, 2007

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD ₅	10 mg/l	15 mg/l	5/week	12-Hr. Composite
TSS	15 mg/l	23 mg/l	5/week	12-Hr. Composite
Ammonia-Nitrogen	5 mg/l	10 mg/l	5/week	12-Hr. Composite
Dissolved Oxygen	4 mg/l min.		5/week	Grab
Fecal Coliform Colonies	200	400	5/week	Grab
pH (Standard Units)	6.0 – 9.0		5/week	Grab
Biomonitoring				
<u>Ceriodaphnia dubia</u>	Report	Report	1/quarter	24-Hr. Composite
<u>Pimephales promelas</u>	Report	Report	1/quarter	24-Hr. Composite

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following inspections were performed during the period beginning May 25, 2005 and ending May 25, 2007 for this facility.

Date: September 26, 2006

Inspector: LDEQ

Findings and/or Violations:

- A review of the DMRs for the period of January 2005 through August 2006 revealed several exceedances for TSS.

B) Compliance and/or Administrative Orders

A review of the files indicates that there are no recent enforcement actions administered against this facility.

C) DMR Review

A review of the discharge monitoring reports for the period beginning April 1, 2005 through March 30, 2007 has revealed the following violations:

Month	Parameter	DMR Reported Value	Permit Limit
October 2005	Fecal Coliform, Weekly Avg.	520.3 col/100 ml	400 col/100 ml
January 2007	TSS, Monthly Loading	1260.8 lbs/day	766 lbs/day
	TSS, Monthly Avg.	19.7 mg/l	15 mg/l
	TSS, Weekly Avg.	34.5 mg/l	23 mg/l
	Fecal Coliform, Monthly Avg.	270 col/100 ml	200 col/100 ml

City of Lake Charles
 Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
 Page 8

XII. ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the combined design capacity of 6.2 MGD.

Effluent loadings are calculated using the following example:

$$\text{CBOD: } 8.34 \text{ gal/lb} \times 6.2 \text{ MGD} \times 10 \text{ mg/l} = 517 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 5.0 and 10.0 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
CBOD ₅	5/week	12 Hr. Composite
Total Suspended Solids	5/week	12 Hr. Composite
Ammonia-Nitrogen	5/week	12 Hr. Composite
Dissolved Oxygen	5/week	Grab
Fecal Coliform Bacteria	5/week	Grab
pH	5/week	Grab
Biomonitoring		
<u>Ceriodaphnia dubia</u> (Method 1002.0)	1/quarter	24 Hr. Composite
<u>Pimephales promelas</u> (Method 1000.0)	1/quarter	24 Hr. Composite

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, it is recommended that LDEQ Pretreatment Option 2A language be included in the renewal permit.

Non-substantial Pretreatment Modifications:

LDEQ approved a non-substantial modification to the Pretreatment Program on August 22, 2006 to tighten the legal authority of the Pretreatment Ordinance and to reflect changes in the General Pretreatment regulations resulting from EPA's Pretreatment Streamlining Rule. On November 1, 2006, LDEQ approved a non-substantial modification of the Lake Charles Pretreatment Program to tighten the legal authority of the Pretreatment Ordinance and to provide clarifications to definitions and requirements contained within the Ordinance.

Substantial Pretreatment Modification:

Lake Charles has requested a modification to the City Pretreatment Program to incorporate revised Technically Based Local Limits (TBLLs). This modification is hereby approved by LDEQ and shall become effective as of the effective date of this permit reissuance.

City of Lake Charles
 Sewage Treatment Plants B and C
LA0036366; AI 4839; PER20060001
 Page 9

Date Original Submittal Received at LDEQ	8/4/2003
Date LDEQ determined Submission to be acceptable for the purpose of issuing a public notice of the Pretreatment Program modification application	8/2/2004
Date modification application public noticed by Pretreatment Program	8/28/2004 Document ID # 32598371
Comments Received (yes/no)	No

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of the Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, City of Lake Charles, Sewage Treatment Plant "B/C," November 16, 2006.